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# A study on the impact of visual cues in listening comprehension on Swedish learners of English

University of Gothenburg

Dept of Languages and literatures/English

Spring 2011

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C-level paper, 15 hec

Interdisciplinary degree project

Teacher Education Programme

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Grade: VG

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# 1. Introduction

Listening comprehension might be the language skill that is the most difficult to investigate, hence the least understood in second language research (Vandergrift 2010:160). This is explained by a number of variables, such as the fact that listening involves many complex processes on different levels and that it engages both linguistic and non-linguistic knowledge. Up until 1970, researchers did not focus on listening specifically. Instead, it was believed that theories of reading comprehension also applied to listening and also that listening would develop independently as learners were exposed to the target language (Osada 2004a:57). After 1970, researchers agreed that although there seems to be a correlation between listening and reading, "...listening involves a set of skills in its own right" (Osada 2004b:1). As a result of this change, listening comprehension is currently considered the most prominent aspect of language, as it is believed to facilitate the other language skills; reading, writing and speaking (Vandergrift 2011:455, see also Plass & Jones 2005:478). Correspondingly, Vandergrift argues that learners of English as a second language (L2-learners) have to understand language input from reading and listening in order to improve their productive skills; speaking and writing (2011:455).

In recent second language research, the social aspects of learning have become more prominent, as focus in teaching has moved from content or teacher-centred to learner centred. This means that listening is no longer seen as a cognitive process internal to the hearer, but rather an interactive process where interlocutors jointly deal with problems of message comprehensibility, a process which is sometimes referred to as meaning-negotiation (Branden 2000:429, Hoven 1999:2). Recently, a lot of confidence has also been put in the importance of facial expressions and hand and arm gestures that help listeners to understand the speaker's intended meaning. These aspects of language are also called paralinguistic cues, or more commonly non-verbal communication, which is the term used in this study.

Listening involves visual support in face-to-face communication, but not necessarily during phone calls or when we listen to the radio. This means that listeners do not always have to pay attention to non-verbal information, but if the speaker provides gestures, they are unconsciously interpreted by the listener and "combined with the verbal stream to recover the conveyed meaning" (McNeill 1992:143). In second language research, visual cues are believed to improve comprehension, as asserted, for example, by Canning-Wilson (2000), Jones (2003) and Sueyoshi & Hardison (2005). Visual cues, or visual aids, refer to any visual material that teachers may use to help learners with comprehension, for example pictures, subtitles and video (Jones 2003:43). Contrastively, some researchers emphasise

that there is not yet enough empirical data to actually prove that video facilitates the learning of foreign languages. Rubin is one of the sceptics and mentions the lack of variety in studied languages, as well as the fact that research measures have not been standardised, making it difficult to compare results (1994:1). Still, it seems to be widely accepted in second language research that pre-listening activities aid comprehension, primarily because they help learners to access prior knowledge and provide the learners with crucial vocabulary. Obviously, non-verbal communication adds yet another dimension to the complexity of language, which is why I became interested in the impact of visual cues on Swedish learners of English. As far as I know, no other studies have yet been carried out in this field on Swedish learners of English.

Swedish learners are exposed to English on a daily basis, but all situations do not provide access to the visual dimension of language. The national tests are audio-only, which means that learners have to master listening without visual cues in order to be successful in those tests. Since the impact of visual cues in not yet fully researched, the aim of this study is to investigate the impact of visuals on Swedish learners and to engage in a discussion on the effective teaching of listening comprehension on the basis of the results. My hypothesis is that those who have access to visual cues will outperform those are not exposed to visuals in a listening comprehension test. The results showed that those who had access to visual cues in the experimental group improved their performance on the second listening slightly more than those who were not exposed to visuals in the control group. The results also show that 42% of the participants had full marks on the first listening, whereas 53% had full marks on the second listening, which means that many of the subjects had all of the questions correct. This might indicate that the test was too easy, or that there were not enough questions to show the improvement. In conclusion, the effects of visual cues in listening comprehension remain inconclusive.

In the next section, I provide a background to the field of listening comprehension and verbal and non-verbal communication. In chapter 3, the methodology section, the procedures and techniques used in the study are presented. The results of the investigation are discussed in chapter 4, followed by a discussion in chapter 5. The last chapter includes a discussion with implications for effective teaching of listening comprehension for L2-learners, based on the results of the study.

# 2. Background

In this section, I provide a theoretical background to verbal and non-verbal communication, as well as a description of recent research in the field of gestures and listening comprehension. Studies on the role of visual cues in listening comprehension are discussed in more detail, as they are particularly relevant for this study.

## *2.1. Verbal and non-verbal communication*

Verbal communication refers to the activity of conveying meaningful information through spoken language and works in close relationship with non-verbal communication through facial expressions and body language. In verbal communication, the interplay of new and given information is reflected in the prosody of speech, which is an umbrella term for a number of auditory characteristics of spoken language (Busà 2008:116). Prosody of speech has a very important role in language, as it conveys linguistic and pragmatic meaning. By variations in prosody, speakers can modify their produced speech in order to signal the information status of the utterance to the listeners. Consequently, listeners can easily distinguish between new and given information, ambiguity, questions and statements and emphasises and contrasts (2008:117). According to Busà, prosody might also convey paralinguistic information, for example the emotional state of the speaker or the truth value of what is said (certainty vs. uncertainty). Prosody might also reflect the speaker's engagement, for example if he/she responds to something, seeks support or anticipates possible responses and objections (2008:4). All these multifaceted nuances are conveyed through prosody, which are phonological modifications in the stream of speech. Speakers also vary the articulatory force, stress, emphasis and pitch prominence when speaking, as well as the dynamic use of speed, pauses and tempo (Gassin 1992:97, as cited by Hoven 1999:5). All these modifications follow complex rules and happen in real-time for native speakers, but are not necessarily easy to comprehend for second language learners. Depending on the patterns of L2-learners' first language, comprehension might suffer because of unfamiliarity with the prosodic patterns of the target language (Macaro 2005:170). According to Macaro, the ability to fully override prosodic cues in order to focus on the syntax appears to be a sophisticated skill, perhaps only available to native speakers (ibid:170).

Non-verbal communication is an umbrella term for a whole range of aspects of human communication which are distinct from speech. The most commonly mentioned aspects are facial expressions, hand and arm gestures, postures, positions and movements of the body, all used by the speaker in order to get the message across to the listener (Mehrabian 2007:1). The power of non-verbal communication is well documented in studies involving the McGurk effect, which was discovered in a study carried out in the 1970s on the influence of lip movements on speech perception (Sueyoshi & Hardison 2005:662). McGurk found that speaker's lip-movements are highly influential on listeners' perception of individual sounds and concluded that an illusionary effect occurred when native speakers were exposed to video productions where the auditory and the visual cues did not match. Interestingly, McGurk found that the subjects' perception did not match either cue, since a visual /ga/ dubbed onto an acoustic /ba/ produced frequent percepts of /da/ (Sueyoshi & Hardison 2005:4). According to Sueyoshi & Hardison, similar studies have also been carried out on L2-learners showing the same results, including Hardison (1999).

Facial expressions refer to our ability to express nuances of emotion with the face, for example with lip movements and eye contact (Neighbour 2005:130, see also Matlin 2005:61). Correspondingly, gestures are used either in place of speech or in parallel with verbal communication, usually in synchronisation with the phonological peaks of an utterance (McNeill 2000:26-27). Gestures are not only believed to help the listener in the process of understanding the intended meaning, but also to lift the cognitive load on speakers and thus “free up resources which can be allocated to other areas” (McCafferty & Stam 2008:227). Clearly, non-verbal communication is subtle in nature, which can be attributed to “the lack of explicit coding rules for these behaviours in most cultures” (Mehrabian 2007:2). As opposed to verbal communication, the use of gestures is not conventionalised and operates on “such intricately sophisticated and subconscious levels that it is extremely difficult, if not impossible, for anyone to note and describe all of its effects in words”. (Smith & Moriarty 2004:461, see also McNeill 2000:27). However, it is obvious that non-verbal communication performs functions that speech is unable to perform, whereas speech might express abstract thinking that cannot be expressed by non-verbal cues (Beattie 2004:23).

According to Vandergrift, some listeners are more sensitive to non-verbal communication than others, which means that expressive body language may not necessarily help all learners (2010:162). However, learners have to develop their abilities to interpret the visual features of language, as it may actually help them to improve the performance in both listening and speaking. As for speaking, the Swedish curriculum of English in compulsory education emphasises learners’ ability to use synonyms and body language in order to get

their message across (Skolverket 2000:1). Obviously, learners have to practise the ability to interpret non-verbal communication in order to develop their own use of body language in speaking.

## *2.2. Listening comprehension*

Listening is a complicated skill that involves many simultaneous processes on different levels and engages a combination of linguistic and non-linguistic knowledge (Vandergrift 2010:161, see also Buck 2001:1). Linguistic skills refer to the cognitive processes that listeners use in order to parse speech into meaningful units and recall word meanings from long-term memory, whereas non-linguistic skills refer to the listener's pragmatic knowledge and the capability to make sense of the speaker's body language. In listening comprehension tests, learners' abilities to apply all these skills are measured, even though proficiency is a questionable test construct according to Gass (2010:26).Gass argues that a level of proficiency can only be measured in relation to another variable, for example the number of years the learner has studied English. Researchers of listening comprehension tend to use the terms high-proficiency and low-proficiency learners, without even providing a clear definition. To avoid confusion, I have deliberately refrained from using these terms when describing the subjects of my own study, but apply the terms when they occur in crucial sources.

In the complicated process of listening, speech is parsed into meaningful units and temporarily stored in working memory. Simultaneously, the listener recalls world knowledge stored in long-term memory and relates it to what has been said earlier, as well as relating it to the contextual information available, such as the speaker's body language and facial expressions (Vandergrift 2011:455, see also Buck 2001:27). Furthermore, figurative language might have an intended meaning beyond the literal meaning of the words. This means that listeners also have to recognise any possible usage of rhetorical devices, for example irony and metaphors. Consequently, everything the listener perceives is completely dependent on all that is in his/her mind that may influence the interpretation of the meaning (ibid 2001:26). An interesting feature of listening comprehension is that listeners tend to have hypotheses about what is likely to come next in the stream of speech (Buck 2001:3). Therefore, listeners do not always have to utilise all the information available, which saves time and energy (ibid 2001:3). Obviously, more experienced learners have an improved

ability to predict what is likely to come next in the stream of speech, which also helps them in listening comprehension.

Listening situations might also require the listener to respond, which involves interpretation and evaluation of the speaker's purposes, as well as "perceiving what outcomes he or she [the speaker] might be trying to achieve" (Hedge 2006:235). Consequently, the listener will need intelligence to follow the information, empathy to react in an appropriate way, prior knowledge to understand what is said and cultural knowledge to know what might be suitable follow-up-questions. Moreover, personal knowledge about the speaker might affect the way the listener reacts, interprets and responds to what is heard (Hedge 2006:235). In conclusion, listening requires much more than just the comprehension of the words.

### 2.2.1. Top-down and bottom-up processes

Many researchers agree that top-down and bottom-up strategies are fundamental in both reading and listening comprehension. The latter involves meaning construction by decoding small segments on the phoneme-level and then gradually moving focus up to discourse-level (Vandergrift 2011:456). The opposing strategy is top-down processing, where listeners' prior knowledge together with contextual interpretation builds a conceptual framework for the understanding of details on lower levels (2011:456). The ability to predict what is likely to come next in the stream of speech is a top-down process, since it facilitates lower levels of processing. Consequently, bottom-up and top-down strategies operate simultaneously as listeners create a mental representation of what is heard. Interestingly, listeners tend to vary the use of strategies depending on the purpose of the listening, even though it happens automatically. Naturally, listeners are required to focus on details in some situations, whereas it might be more sufficient in other situations to focus on the context.

According to Vandergrift, listening comprehension consists of three interconnected phases: *perceptual processing* (perception phase), *parsing* and *utilisation*. The perception phase consists primarily of bottom-up strategies, whereas the parsing phase involves both bottom-up and top-down processing. During the utilisation phase, listeners exclusively use top-down strategies, generally applied by high proficiency learners (Osada 2004a:4). Studies have shown that L1-listeners manage the three phases relatively easily, without investing much effort in actually decoding individual words. Contrastively, L2-learners have less linguistic knowledge and therefore have to use more controlled processing in listening comprehension. Low-skilled L2-learners might even just activate the parsing phase and have therefore no space left for top-down processes at all (Osada 2004b:63, see also Rouet & Potelle 2005:303). To improve comprehension, L2-learners can learn how to focus on

content words, which might make it easier to get a general idea about the topic, even though it requires more time and effort as opposed to automatic processing (Vandergrift 2010:161). The Swedish curriculum of English language for compulsory education emphasises learners' abilities to understand the main points and to draw conclusions of what is being said, which means that strategies might be useful for some learners when comprehension breaks down (Skolverket 2000:1). According to Vandergrift, experienced learners can use their metacognitive knowledge to compensate for gaps in comprehension, for example by using cognitive strategies or contextual cues to infer what was not understood (Vandergrift 2010:161). In other words, experienced learners are able to activate top-down processes to a further extent compared to less experienced learners, who might have to learn other strategies in order to succeed in listening comprehension.

As previously mentioned, there are no studies that specifically focus on Swedish learners and visual cues in listening comprehension to my knowledge. However, the Swedish STRIMS-study (Strategies in Modern languages) investigated successful L2-learners and their use of strategies in Modern languages; French, Spanish and German. The study concluded that successful learners focused on the main points in listening comprehension, for example by listening for "important words", as one of the subjects put it (Öman 2000:81). The study was carried out in Sweden during the 80s and the 90s and investigated learners' strategies in listening, writing and reading. Obviously, the study did not include English, but the findings are still relevant for L2-learners of English.

### 2.2.2. Difficulties in listening comprehension for second language learners

According to studies in listening comprehension, anxiety might be a constraining factor for learners in the L2-classroom. Graham (2006) mentions the temporal and implicit nature of listening comprehension, whereas Hedge points out the fact that learners do not always realise that it is not necessary to perceive every word in the stream of speech in order to make sense of spoken language (Graham 2006:5, see also Jones 2003:42 and Hedge 2006:237). Consequently, many learners have unrealistic expectations in listening exercises, which might affect their self-confidence (Hedge 2006:237). In order to alleviate anxiety, Hedge emphasises the importance of introducing pre-listening activities, as well as helping learners develop sufficient listening strategies (Hedge 2006:237-238). Furthermore, background noise and unfamiliarity with the topic might also constrain comprehension, which has also been intensively investigated in research (Graham 2006:5). Studies have also been carried out on the effect of visual aids in listening comprehension, for example on the use of

captions and contextual images, since some researchers believe that they might improve learners' performance (Al Alili 2009:12).

In a test situation, comprehension is also affected by a number of variables dependent on the individual learner, such as the test taker's age, proficiency level and ability to use listening strategies. According to Berne, numerous studies have been published in the field of listening comprehension strategies, for example Rubin (1990), Rost & Ross (1991), Bacon (1992) and Vogely (1995) (Berne 1998:170). Vandergrift also comments on strategies and points out that they might help learners to regulate their listening, for example by focusing on the context instead of details. This also includes the ability to accept that one does not have to understand everything that is being said in order to grasp the main points. She explains: "...it is thus sometimes necessary for students to tolerate vagueness and incompleteness of understanding" (Vandergrift 2011:455).

For L2-learners in particular, listening comprehension might break down due to unfamiliarity with certain phonological variations. Enunciation, pronunciation and accent might affect comprehension, as well as text characteristics such as speed delivery, pauses and hesitations. Other modifications such as assimilation, elision, intrusion and reduced forms might also affect learners' performance, as they make the word boundaries unclear in spoken language. These modifications do not tend to cause problems for native speakers, even though they follow complex rules and happen in real-time, but might affect comprehension for L2-learners (Vandergrift, 2011:455). When word boundaries are unclear, some learners are forced to simply use bottom-up processes in order to desperately identify individual words in the stream of speech (Osada 2004b:60). Obviously, listeners cannot ask the speaker to repeat or clarify parts of speech in a test situation, as one would do in a face-to-face situation (Öman 2001:80).

In the following section I will discuss recent studies on visual cues in listening comprehension for L2-learners.

## 2.3. Studies on visual cues in listening comprehension

As mentioned, there are many studies on visual cues in listening comprehension for second language learners. However, while some researchers claim that visual cues have a positive effect, others maintain that there is not yet enough empirical data to support the notion that visuals facilitate comprehension. In section 3.1 studies that show the positive effects of visuals are discussed, whereas research that has shown low or no effects of visual cues is discussed in section 3.2.

### 2.3.1. Positive effects of visual cues

As mentioned, some research has been carried out on the effect of visual cues in second language listening comprehension. For example, Chung (1999) studied L2-learners from Taiwan and their response to pre-listening activities and captions in a listening test, to contrast with the control-group that just took an audio-only test. Chung concluded that learners who used a combination of pre-listening activities and captions scored the highest, whereas those who took the audio-only test scored the lowest (1999:300). Ginther carried out a study on French learners of English and found that visual cues enhanced learners' performance in listening comprehension, but only when they provide information that corresponds or complements the audio input (2002:2).

Some studies focus on the use of multimedia in second language learning, for example Jones (2003) presented a study called *Supporting Listening Comprehension and Vocabulary Acquisition with Multimedia Annotations*. The subjects were English college-students of French who were divided in four groups, each of which was given a multiple-choice test with either 1) no annotations, 2) only verbal annotations, 3) only visual annotations or 4) verbal and visual annotations and the results of each group were then compared. Jones found that those who took the test with both verbal and visual annotations scored the highest, whereas those who took the audio-only test with no annotations scored the lowest. She concludes:

> This study provides qualitative evidence for a generative theory of multimedia learning that suggests that the availability and the choice of visual and verbal annotations in listening comprehension activities enhances students' abilities to comprehend the material presented and to acquire vocabulary (2003:1).

Hoven is also positive on the effects of multimedia, as it provides learners with visual context, as well as understanding for the non-verbal aspects of communication. He notes that video and other multimedia resources are becoming more commonly used in L2-

learning contexts and emphasises that "it has become essential to incorporate a discussion of the impact of visual comprehension on listening and listening tasks into the new language learning models" (1999:4). Positive effects of visuals were also reported by Perry, who claims that listeners become more active when listening is accompanied by visual cues. He also states that some learners might find it difficult to concentrate on listening for a long time, which is why visual cues might help and keep some learners active for a longer period of time (2001:15). Perry is also convinced that visual cues make the learners become more active in the process of listening comprehension, as he emphasises that: "...the non-verbal aspect of speech is an integral part of the whole communication process" (2001:666). Hedge also emphasises the importance of visuals and explains that by seeing the speaker, comprehension is facilitated since it reveals the relationship between the people involved in the conversation (Hedge 2006:246).

Sueyoshi & Hardison (2005) studied the impact on facial cues in listening comprehension on Korean and Japanese learners of English. Sueyoshi & Hardison's aim was to investigate "...if access to visual cues such as gestures and lip movements facilitate ESL-students' listening comprehension" (2005:661). They hypothesised that a facilitatory effect might be found on the basis of recent research in listening comprehension, "demonstrating the contribution of facial cues to perceptual accuracy and word identification" (2005:8). Sueyoshi & Hardison's subjects listened to a lecture which was rather informal in style and thereafter took a test with one of the following conditions: 1) audio-only, 2) just face, no gestures and 3) audiovisual including gesture and facial expressions. Sueyoshi & Hardison's concluded that those who took the audiovisual test with both gestures and facial expressions scored the highest, whereas the audio-only group scored the lowest. Sueyoshi & Hardison also found that the impact of visual cues was positive, regardless of the subjects' proficiency level (2005:30). They also make an interesting point in claiming that that even though low-proficiency learners might rely a lot on non-verbal information, high-proficiency learners tend to be better at interpreting visual cues. The reason is simply that proficient learners might have more experience of interaction in the target language, which improves their ability to interpret visual information (2005:8). When considering Sueyoshi & Hardison's work, it is worth mentioning that their study was carried out with people of mixed nationalities, which means that the subjects in the study had learnt English under different circumstances. The fact that the study did not involve a homogeneous group of subjects might have affected the results as well, but is not mentioned by the authors.

Cabrera and Martinez studied the effects of visual cues on Mexican learners of English and found that those who were exposed to visual information improved comprehension, as compared to those who did not have access to visual cues (2001:2). A similar study was

carried out by Jones & Plas (2002), who concluded that learners of EFL remembered more from a text when they were exposed to both visual and verbal annotations (as cited by Meyer 2005:480). Ockey also studied the effect of visual cues in listening comprehension and the learners' attitude to the use of video and still-images in listening comprehension. Ockey concluded that some learners found the video-stimulus very helpful, whereas some learners thought the video was of no help and that it constantly distracted them (2007:520). This phenomenon is also described by Öman, who writes that studies on Swedish learners show that many of them had a positive attitude to the use of visuals in listening comprehension, whereas some said that it hindered comprehension (Öman 2001:81).

Canning-Wilson studied video and listening comprehension on EFL learners and found that scenes that were backed up by an action or body language were considered easier to understand by the subjects, compared to scenes where the speakers did not use body language (2000:5). She concludes that visual cues are important for comprehension, but emphasises that video might facilitate understanding for some learners, but also be distracting to others. Furthermore, she points out that the learners in the sound-only conditions were less successful in maintaining concentration in listening (2000:6).

### 2.3.2. Studies that show low effects of visual cues in listening comprehension

Even though many researchers have found visual cues to have a positive effect for listening comprehension, some of them argue that the effects might actually depend on a number of variables. For example, Berne claims that the effect of visuals may vary according to the proficiency of the listener (1998:1). Herron (1994) found that the use of contextual still-images had a positive effect, but concluded that pre-listening activities were the most effective method to improve the learners' performance in listening comprehension (as cited by Meyer 2005:475). Still, both Herron and Meyer concluded that the audio-only group scored the lowest.

According to Canning-Wilson, Balatova (1994) found that visual cues enhanced learners' comprehension in general, but did not necessarily stimulate the understanding of the text (Balatova 1994, cited in Canning-Wilson 2000:3). These results emphasise the importance of pragmatic knowledge in listening comprehension, as more experienced learners might use their world knowledge to compensate for gaps in comprehension. This is also related to the findings of Sueyoshi & Hardison, who concluded that experienced L2-learners might be more aware of visible cues and are therefore better to make use of them as a listening strategy (2011:28).

Coniam (2002) studied Hong Kong learners of English and investigated the effects of two different kinds of visual stimuli: contextual and content visuals (Ockey 2007:520). The latter was a photo or a drawing that was related to the recording, whereas contextual visuals had the primary function to set the scene, for example a photo of a group of people engaged in conversation. The study reported no significant differences in the results between the two groups. Interestingly, Ginther (2002) carried out a similar study in the US of a mixed group of L2-learners of English. Ginther found that visuals improved learners' comprehension when they provided information that complemented the audio, whereas context visuals had a slight debilitating effect on the performance (2002:157).

In this section, I have presented a background to the understanding of listening comprehension. Recent research in the field of listening comprehension has been discussed, as well as studies that show positive and negative effects of visual cues in listening comprehension. In the next section, I provide more information about the participants of the study and explain how the study was carried out.

# 3. Methodology

The study that I carried out aimed at measuring the impact of visual cues on L2-learners' listening comprehension. This was tested by playing the subjects a recorded interview originally broadcasted on TV and thereafter letting the subjects answer a questionnaire with multiple-choice questions on the interview. All the subjects listened to the interview twice, but just about half of them were exposed to the video on the second listening. The study followed the structure of experimental research, as described by Gass (2010:7). This means that an experimental group receives focused attention on one particular part of language, which in this case was the impact of visual cues in listening comprehension. The control group was exposed to the same variable, the interview with Davina McCall, but without the element of visual cues.

The investigation was carried out on 58 subjects at the age of 16 to 18 at an upper secondary school in the city of Vänersborg in Sweden. The school is a so called "free school"[1] with about 120 pupils, which means that it is smaller than the other school of choice for adolescents of this age group in Vänersborg, which is the state school with about 1400

[1] A state-funded school which follows national laws and regulations for education, but is independently governed.

pupils. The school offers two orientations of studies; science and social science. Obviously, these learners are enrolled in mostly theoretical courses, but that does not necessarily mean that they are more proficient in English language compared to other learners. Still, the fact that the school is rather small might have a positive effect on the learners' progress in language, as the teachers are able to help the learners quite easily since they meet them on a daily basis. This means that the subjects were ordinary L2-learners of English, but the school might be described as unusually small and intimate.

All subjects were enrolled in obligatory English courses and the study was carried out during one of their English classes. About 3/4 of the subjects were first year students enrolled in the English A course, whereas 1/4 were in their second year, enrolled in English B. This means that the participants of English B were one year older and had received English training for one more year than the other participants, which is why the results of this particular group have been counted separately in order to maintain validity of the study. Furthermore, all subjects who had lived in an English-speaking country for more than 6 months were excluded in order to achieve uniformity in the results. Obviously, the validity of the results would increase if the participants had learnt English more or less under the same circumstances. All in all, there were four groups that participated in the study, supervised by three teachers of English. The groups took the tests on different occasions within a time span of two weeks, since there was no other way to do it for practical scheduling reasons.

The recording used for the study was an interview taken from the British talk show Parkinson on BBC, where TV-presenter and former drug addict Davina McCall was interviewed by Michael Parkinson. Since the interview was taken from *Youtube*, neither the sound nor the image quality was perfect. Still, it was clear enough for the purpose of this study, as the programme had been recorded in a studio. The interview concerns Davina's experiences of drugs and how she finally managed to find a way out of her addiction. The interview is 5 minutes, but I limited it to 2 minutes and 50 seconds, where there was a natural stop.

According to studies in second language listening comprehension, the speaker's speech-rate might have an influence on L2-learners comprehension. In order to ensure that this factor did not influence the results, Davina's speech-rate was measured in the preparations for the test. When doing this, the interview was transcribed and a passage was picked out where she speaks uninterruptedly for one minute. Obviously, this did not calculate her average speech-rate, but still it would be enough to provide a general notion of her pace of speech. Davina's speech-rate was found to be 162 words/minute, which is an average pace according to Tauroza & Allison (1990:91). This means that I do not expect this factor to have had any significant influence on the subjects' performance in the listening test, even though

other characteristics of her voice might have affected the results, such as her prosody of speech. Michael Parkinson's speech-rate was not measured, primarily as he did not speak enough to measure it properly.

As the investigation aimed to find out whether the use of gestures and facial expressions would help the subjects with comprehension, it would have made sense to analyse Davina and Michael's usage of non-verbal communication in the interview. Unfortunately, the time frame of this study did not allow me to do so, but a brief review of Davina's body language indicates that she uses gestures and facial expressions quite extensively in order to emphasise what she is saying. On the contrary, the interviewer seems to be less expressive in his use of non-verbal elements. Obviously, the study that I have carried out does not measure the impact of facial expressions and gestures individually, but rather the effect of all non-verbal elements in collaboration.

In the experiment, the subjects listened to the recording and were then asked to answer four multiple-choice questions that concerned what had been discussed in the interview. The four questions primarily concerned comments made by Davina, but one of the questions also refers to a comment made by the interviewer. The questionnaire is enclosed in Appendix 1. Before the actual test was carried out, the questionnaire was piloted on six Swedish learners of English at the University of Sussex. The intention was primarily to try the functionality of the questions and to investigate if the interview was easy to follow. The pilot study indicated that the questions seemed clear and understandable, as the participants scored 80% after the first listening and 100% after the second listening. These subjects scored impressively high, even though there was a lot of background noise in the classroom where the test was carried out.

One week before the actual tests were launched, the teachers received emails with instructions on how to carry out the test, which are included in Appendix 3. The procedure of the test was carried out as follows: At the beginning of the session, the subjects received the questionnaire from their teacher by email. The subjects opened the emails on their personal laptops, which was the first time they saw the questions. The teachers told them that they were going to participate in a study on listening comprehension, but none of the subjects knew what the research questions was. They were also told about the topic of the interview, as the clip did not have an explicit beginning or ending. Moreover, studies actually show that L2-learners' tend to improve comprehension when they have background knowledge of the topic, as mentioned in chapter 2. In order to prevent anxiety in the test situation, the teachers also emphasised that the answers would be collected anonymously and would not be part of the subjects' assessment.

Before listening to the interview, the participants got some time to read through the questions. They were arranged in chronological order, as it would probably make it easier for everyone to follow the conversation. The subjects were also told to give information about their name, age, gender and if they had lived in an English-speaking country for more than six months. In the end, I decided not to separate the results in relation to the participants' gender, since the distribution of boys and girls was rather unbalanced in two of the groups. The age of the subjects is not presented in the results, since all individuals were either 16 or 17 years old, apart from the participants in one of the non-visual groups who were 17-18 years old. After having read through the questions, both groups listened to the interview and were thereafter given three minutes to fill in the answers. They sent their answers to me directly by email, using their individual laptops. They were told to clearly separate the two sets of answers from the first and the second listening, as the intention was to plot the improvement between the two times they had listened to the interview. After three minutes, the non-visual groups listened to the interview again. The subjects of the visual groups also listened to the interview twice, but on the second listening they were exposed to the video projected on the wall of the classroom. Apart from that, the procedure of the test was the same in both groups. The subjects finished the tests on their laptops by sending their answers directly to me by email. Thus, paper and pencil were not used in the test situation.

When the answers were counted, each of the four questions generated one point. The set of answers from each participant was organised in columns with the intention to separate the answers from the first and the second listening. Thereafter, the subjects' correct answers were added up, showing the total score of each group. The sum was also divided by the potential full score for each group in order to calculate the percentage of correct answers, which was necessary as the number of subjects differed in the groups. By doing this, the groups' overall improvement after the second listening could be measured and compared.

In this section, I have summarised the methods used to collect the data and described how the results were measured. In the next section, the results of the study are presented.

# 4. Results

When all results were collected and counted, they showed that no less than 43% of the subjects had full marks on the first listening, whereas 52% had full marks on the second listening. As a matter of fact, only two of all 58 subjects got no more than 2 of 4 questions correct on the second listening, which means that most of them got 3 or more questions correct. All in all, the groups had between 75% and 95% of the answers correct, which clearly shows that most subjects did well in the tests.

The results show that the visual groups improved slightly more than the subjects in the non-visual test, especially, when the 2nd-year subjects were excluded. However, the impact of seeing the person speaking was not as influential as one would expect from the hypothesis mentioned in section 1.

**Table 1. Non-visual, group 1 (first year)**

| | 1st listening | 2nd listening |
|---|---|---|
| Correct answers (15 subjects) | 52/60 | 54/60 |
| Percentage of the potential full score | 87% | 90% |
| Improvement | | 3 percentage points |

**Table 1 shows the results of the group of 1st year learners that took the non-visual test. The first column shows the number of correct answers in relation to the potential full score of this group, which was 60. All in all, the group improved by two correct answers from the first to the second listening, which was 3 percentage points.**

The group presented in table 1 above scored 87% of the answers correct on the first listening and improved to 90% on the second listening in the non-visual test. Generally, this group had high marks already on the first listening, compared to the other groups.

**Table 2. Non-visual, group 2 (second year)**

| | 1st listening | 2nd listening |
|---|---|---|
| Correct answers (15 subjects) | 46/60 | 50/60 |
| Percentage of the potential full score | 77% | 84% |
| Improvement | | 7 percentage points |

**Table 2 shows the results of the non-visual test in the group of 2nd-year learners. Overall, this group improved by 7 percentage points from the first to the second listening. The potential full score for this group was 60.**

The 15 subjects in this group were in their second year, which means that they had studied English for one more year compared to the other subjects. Surprisingly, they had the lowest score of all groups after the first listening, even though they improved strongly by 7 percentage points after the second listening. When the answers were counted, the results from this group were separated in order to maintain validity of the results, even if their results roughly matched those of the other groups. As shown in table 2, the overall group score was 77% on the first listening, which was 10 percentage points lower compared to the other non-visual group after the first listening.

**Table 3. Visual, group 1 (first year)**

| | 1st listening | 2nd listening |
|---|---|---|
| Correct answers (16 subjects) | 48/64 | 51/64 |
| Percentage of the potential full score | 75% | 80% |
| Improvement | | 5 percentage points |

**Table 3 shows the results of one of the two groups that did the visual test. They got 80% of the marks on the second listening, which was the lowest score of all groups on the second listening. The potential full score for this group was 64.**

The group presented in table 3 got 75% of the marks on the first listening, which was the lowest score of all groups at that stage of the test. Even though they improved on the second listening, the final results are still the lowest of all groups.

**Table 4. Visual, group 2 (first year)**

| | 1st listening | 2nd listening |
|---|---|---|
| Correct answers (12 subjects) | 41/48 | 44/48 |
| Percentage of the potential full score | 85% | 92% |
| Improvement | | 7 percentage points |

**Table 4 shows the results of the other visual-group, which had the highest score of all on the first listening. The potential full score for this group was 48.**

This group already had high marks on the first listening, but managed to improve significantly by 7 percentage points on the second part of the test. This improvement was

similar to the non-visual group with second-year subjects, who also improved by 7 percentage points on the second listening. Worth noting though is that this group had fewer subjects compared to the others, which made the improvement more significant.

Overall, the visual groups improved by 6 percentage points between the first and the second listening (as table 5 shows), whereas the non-visual groups improved by 5 percentage points (see table 6). This means that the difference in improvement between the groups was only 1 percentage point when all groups were included in the calculation.

**Table 5. Overall total score – non-visual groups**

| | 1st listening | 2nd listening |
|---|---|---|
| Correct answers (30 subjects) | 98/120 | 104/120 |
| Percentage of the potential full score | 82% | 87% |
| Improvement | | 5 percentage points |

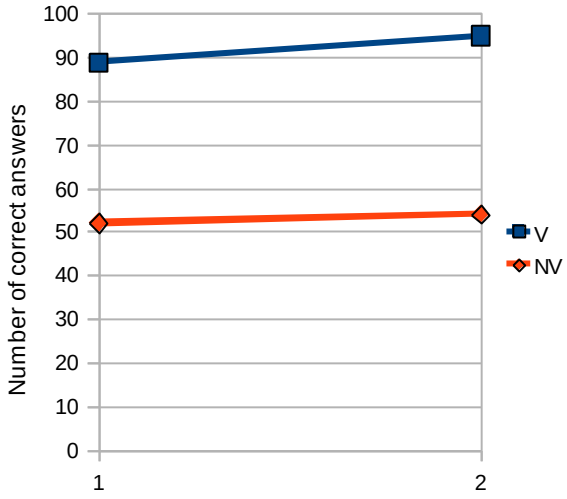
**All in all, the non-visual group improved by 5 percentage points on the second listening, which indicates that listening several times facilitates comprehension. The total scores in the two test groups that did the non-visual test have been added up and thereafter divided by the potential maximum score for the 30 subjects that did this test, which was 120.**

**Table 6. Overall total score – visual groups**

| | 1st listening | 2nd listening |
|---|---|---|
| Correct answers (28 subjects) | 89/112 | 95/112 |
| Percentage of the potential full score | 79% | 85% |
| Improvement | | 6 percentage points |

**All in all, the 28 subjects that did the visual test improved by 6 percentage points on the second listening, as shown in the table 6 above. The potential full score was 112, as there were 28 subjects in this group.**

**Graph 1. The overall score in the visual and the non-visual tests (*without the 2nd year subjects)**

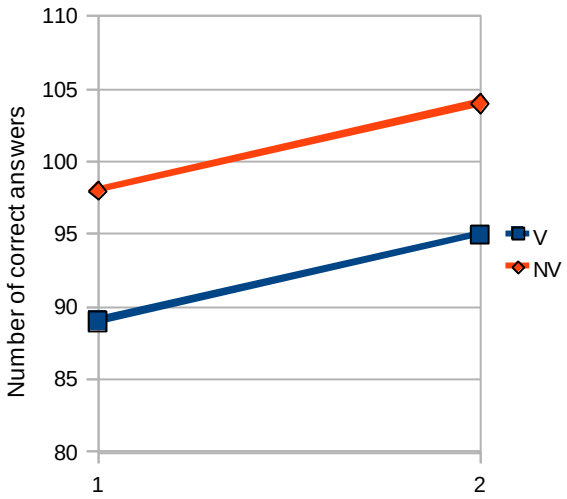



**Graph 1 above shows the total results of the visual and the non-visual tests, excluding the results from the second year subjects. The steepness of the line shows the improvement between the first and the second listening. The line that shows the visual group is further up on the Y-axis as there were more subjects in that group in this calculation.**

The lower line in graph 1 above shows the improvement in the performance of the 15 subjects in the non-visual test, which goes from 52 to 54. The other line, which shows the overall scores in the visual group, is higher up on the Y-axis as the calculation is based on more subjects. That line is also steeper, as the overall improvement in the visual group was slightly higher compared to the non-visual group, especially when the 2nd-year learners were

excluded. When counting percentages, the improvement in the visual group went from 79% to 85%, which is an increase by 6 percentage points. The improvement in the non-visual group went from 87% to 90%, which is an improvement by 3 percentage points. This means that the overall improvement in the visual group was 3 percentage points higher compared to the non-visual group when the answers of the 2nd-year learners were not counted.

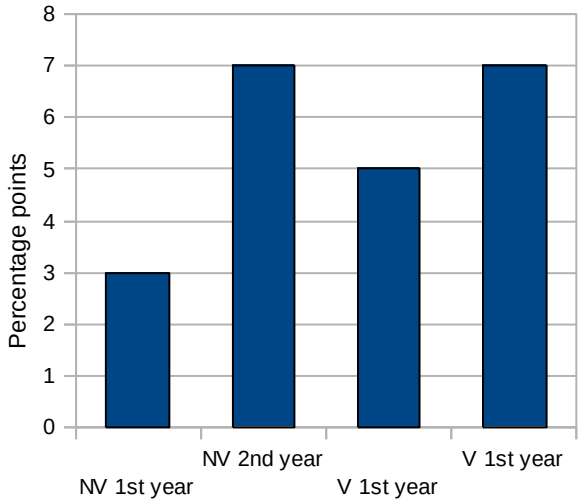
**Graph 2. The overall score in the visual and the non-visual tests (all groups)**




**Graph 2 shows the overall results from the visual and the non-visual tests, including the second year subjects. The blue line shows the same values in graph 1 and 2, since it is based on the same values in both graphs. As the top line shows, the non-visual group scored higher compared to the visual group.**

As graph 2 indicates, the overall improvement between the first and the second listening was almost identical in the visual and the non-visual groups when all subjects were counted. As mentioned, the difference was 1 percentage point between the groups in this calculation. Graph 2 is based on more subjects compared to graph 1, but the fact that some of them were older than the others may have distorted the results. The non-visual group had a higher result on the first listening, which indicates that they were the stronger group. In conclusion, these graphs show that the visual groups had the sharpest improvement, even if the non-visual groups had the highest scores.

**Graph 3 - Improvement**




**Graph 3 shows the improvement on the second listening in each of the test groups. NV means that the bar represents a non-visual group, whereas V refers to a visual group.**

Graph 3 shows that the non-visual group with second year subjects improved by 7 percentage points, which was the same improvement as for one of the visual groups. The non-visual group with 1st-year learners had the lowest improvement, even if they had the highest score of all groups on the first listening, as shown in table 1.

In the following section, the impact of visual cues on L2-learners' listening comprehension is discussed on the basis of the results, as well as factors that may have affected the outcome of the study.

# 5. Discussion

In this section, I discuss the results and the methods used for the study and provide a pedagogical perspective on the use of visual cues in listening comprehension.

## *5.1. General discussion of the results*

When interpreting the results, there a few factors that ought to be considered. To begin with, the validity of the study would have increased if I could have arranged a situation where the groups had taken the tests on the same day. Unfortunately, this was not an option as I wanted to involve as many subjects as possible in the study. It is possible that some of the subjects told each other about the test between the sessions, but it is not likely that this actually had an impact on the final results, especially, since the teachers revealed neither the answers to the questions nor the fact that all groups would take the same test.

The three teachers that carried out the study in the test groups informed the subjects about the procedures of the test and briefly about the study as such. All teachers had received the same instructions, but it is still possible that they presented the task slightly differently to the groups. The instructions provided to the teachers were intended to be clear and easy, but it is impossible to know to what extent they actually followed the template in the test situation. Obviously, it would have been better if I had interviewed the teachers after the sessions and monitored the additional information that might have been provided to the test takers.

When summarising the results, all groups appeared to have improved comprehension on the second listening, which corresponds to Osada's statement that repetitions of passages facilitates comprehension in listening exercises (2004a:4). Still, the difference in improvement between the visual and the non-visual groups was less than expected. The results were surprising, since many studies show a positive effect of visual cues on L2-learners' listening comprehension, as discussed in section 2.3.1. Apparently, many of the subjects already got most of the questions correct on the first listening, thus many of them did not have much to improve on the second listening. The high results could be interpreted as an indication that the questions were too easy in relation to the subjects' proficiency level, which means that more difficult questions might have made it easier to determine the difference between the groups. More questions might also have made it easier to measure the difference in performance between the groups, as four questions did not seem to be enough to clearly show the difference in improvement.

Another factor that might have influenced the results was the fact that the subjects in one of the groups were one year older than the others. The results of this particular group were separated in some of the calculations in order to maintain reliability of the study, even though they did not score differently compared to the others. As this group of subjects improved a lot on the second listening, the results differed somewhat when they were included in the calculation of the overall effect of visual cues. Excluding the 2nd-year subjects, the visual group improved by 6 percentage points, compared to 3 percentage points for the non-visual group. Interestingly, the difference between the visual and the non-visual groups was just 1 percentage point when the older subjects were included. Obviously, the results point in two different directions, depending on whether the 2nd-year subjects were included or not. This indicates that a more extensive test with more subjects would have been necessary in order to draw reliable conclusions about the effects on visual cues in listening comprehension.

The questionnaire that was used for the study had four multiple-choice questions that primarily focused on details (see appendix 1). These questions were easily marked, but did not give the subjects any freedom to express anything apart from what was concerned in any of the four questions. Even though a fair number of the subjects did well in the test, the results might have been even better if a few open-ended questions had been included as well. It is likely that some of the participants actually did follow the main points of the interview, but unfortunately missed out the particular details that the questions were concerned with. This means that the multiple-choice questions might have restrained the performance of some of the subjects, as the questionnaire offered just one way of giving answers. The limitations of listening comprehension tests are also brought up by Sueyoshi & Hardison, who point out that listening comprehension scores show nothing about the process of listening or why someone does not understand (2005:28).

The results of the study show the circumstances in a specific group of learners in a certain context. Obviously, the results cannot be generalised to all Swedish learners of English, as "it might be difficult to make generalisations if the research is based on an in-house placement test, compared to a broad-based test with standardised measures (Sueyoshi & Hardison 2005:163). Still, the results could be interpreted as indications on the effects of visual cues on listening comprehension, which means that visual cues might facilitate comprehension for Swedish learners, even if they are not necessarily a crucial element for good performance in listening.

In conclusion, the findings of my study are ambiguous, as they differ depending on what groups are compared. Possibly, there were not enough questions in the questionnaire to show the improvement, or the questions might have been too easy to clearly show an

improvement between the first and the second listening. As mentioned, a more consistent group of subjects would also have increased the validity of the results. However, the study emphasises the fact that more research is necessary in this field in the future, as it has been difficult to draw conclusions from the results.

## *5.2. Implications for teaching*

When working with listening comprehension in the classroom, Hedge points out that the most important task for teachers is to develop learners' confidence in listening to English (2006:243). Evidently, lack of confidence can have a negative effect on listening performance, which is why a lot of research has been devoted to the effect of listening strategies and pre-listening activities on L2-learners. Apparently, learners tend to improve their comprehension when they are prepared for the listening session, as discussed in chapter 2. This means that the main purpose of using visual material in the classroom is to help learners develop confidence in listening, as is the intention of pre-listening activities and listening strategies. Another reason to use visual material in the classroom is that the curriculum of English requires learners to be able to use body language themselves when needed in oral communication, as mentioned in section 2.1. Consequently, L2-learners have to be exposed to native speakers' body language and learn how to interpret it in order to develop this skill.

The study that I have carried out shows that visual cues might have a positive effect on L2-learners' listening comprehension, even though the effect might not be that significant for all learners. Therefore, teachers ought to try the methods mentioned above in practice with the intention of finding out what best suits their group of learners. As for visual cues, it may be useful for learners to practise listening comprehension both with and without visual elements in order to improve their ability to manage different kinds of listening situations in real life. Undoubtedly, the ability to interpret non-verbal communication is an important part of human interaction, even though gestures and facial expressions are not necessarily crucial for all learners when listening to English.

For future research, it would be interesting to investigate the effects of visual cues in relation to the age of the subjects. Would the effect have been more extensive on younger learners? It would also be interesting to investigate the impact of visual cues in relation to the subjects' language proficiency. Would the effect of visual cues be different if the subjects had just started to learn English?

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# Appendix 1 - Questionnaire

Name:_____

Age:_____

Male ☐ Female ☐

Have you ever lived in an English speaking country for a longer period than 6 months?

Yes ☐ No ☐

You will hear an extract from a BBC interview with TV-presenter Davina McCall. The questions are in chronological order as they appear in the interview and you will hear the interview twice. Answer the questions by choosing one of the letters and send them with an email to the following address: da225@sussex.ac.uk

Davina talks about her relationship with drugs. The clip you will hear starts in the middle of the interview. Please listen carefully after the interviewer has asked the first question: What was the path into drugs? What kind of path did you take? How did it start?

**What does Davina say about her mother?**

a) She was supportive during her teenage years

b) She was an alcoholic

c) She knew that Davina had drug problems

d) Her mother is not mentioned in the interview

**At what age did she start taking drugs?**

a) 12-13

b)14-15

c)15-16

d) 16-17

**3) What happens, according to the interviewer, from the day you start inject heroine?**

a) It's the beginning of the end

b) All drugs are not dangerous

c) You will die on the same day

d) He does not say anything about this

**4. What does Davina think will happen if she talks about drugs in the public domain?**

a) Some people may think that drugs are not dangerous

b) Nothing particular happens

c) People will realise that drugs are dangerous

d) This is not mentioned in the interview

# Appendix 2 - The interview

**What was the path into drugs? What kind of path did you take? How did it start?**

I've got to say actually, that's was one of reasons why I was very nervous about the making of Cannabis a class-C drug because my first route into drugs was via Cannabis and I've spoken to lots of other reformed addicts and you know often they say the same thing and I think it's such a Russian Roulette with drugs, like, some people might smoke a joint and then never have another drug again and other people might smoke a joint and end up dead, sort of two years later, so, drugs are bad, I think, in any shape of form, because that, you know, you don't know whether you're an addict or whether it's in you and I had a sort of family history with my mum being an alcoholic and everything, that I had to....and I had to be very careful and it started, you know youngish I mean smoking cigarettes, the odd one, you know, every now and then, at 12, 13, and then, you know, first....with drugs at sort of 15, 16, nobody obviously ever knew about it, I do it all in secret or I, you know, bumped into somebody let's say in Paris, when I go there on holiday, said “nobody in England would know”, you know what I mean, I had these kind of two lives.

**What kind of drugs where you on in the end?**

In the end, I ended up on heroin and cocaine.

**Heroin, that's heavy duty isn't it?**

Mm, the other thing is that I've never injected heroin, and for a long time it made me sort of think feel that that was sort of ok, and that I had a job and that I, you know kept my job together, and I, mm, on the face of it, you know, I was kind of, trying to pretend that everything was ok, but at the end of the day heroin catches up with you and even if you think you've got it under control for a year, or two years, in the end it will become a daily habit and that's when I got into big trouble.

**I mean, when you start into heroine, I mean, all these drugs are highly addictive, they do say that once you take heroin, and some say that once you inject heroin, that's the beginning of the end, you know, you can actually count the days**

Yeah, I mean, I'm fortunate enough that I've never tried crack cocaine, but, you know, I've heard that's the worst of the worst of the worst, you know, obviously heroin I think is a very powerful drug and I mean, I almost, sometimes even don't like talking about it because if I talk about it in the public domain, I don't want people to look at me and go, “well, she did it and look, she's alright”, you know what I'm saying? So I get nervous about it and I think, what can I say to people, I don't want to lie to people and say “it's gonna kill them the day they take it”, but all I can say is that the minute you take it your on the slippery-slope so just don't bother starting.

# Appendix 3 – Teachers' instructions

*Non-visual test*

Presentation of the test (You do not have to participate): This test is about listening comprehension (do not say exactly what I'm testing). The answers will be collected anonymously and their answers will not be forwarded to their tutors or be part of assessment. The results doesn't matter, it just matters for my research, so try to think about it as an exercise.

- Short presentation of Davina McCall (presenter of Big Brother UK)
- Students access the questionnaire via Fronter
- Prepare to send an email with the topic “test 1”
- Read the instructions and the questions
- Listen to the interview from Youtube
- A pause for 3 minutes for students to write their answers in an email and send it to da225@sussex.ac.uk
- Prepare to write a new email with the topic “test 2”
- Listen to the interview again
- The students have another 3 minutes to write their answers in an email and send it to da225@sussex.ac.uk

*Visual test*

- Presentation of the test (You do not have to participate)
- Short presentation of Davina McCall (presenter of Big Brother UK)
- Students access the questionnaire via Fronter
- Prepare to send an email with the topic “test 1”
- Read the instructions and the questions
- Listen to the interview from Youtube
- A pause for 3 minutes for students to write their answers in an email and send it to da225@sussex.ac.uk
- Prepare to write a new email with the topic “test 2”
- Listen to the interview again, this time with the video image projected onto the wall
- The students have another 3 minutes to write their answers in an email and send it to da225@sussex.ac.uk